AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A method of treating, preventing, delaying the onset of, or reducing sepsis in a mammal comprising administering to the mammal a therapeutically effective amount of at least one chemically modified or mutated erythropoietin and a pharmaceutical carrier.

2.-36. (Canceled)

37. (Previously presented) The method of claim 1, wherein said sepsis has not proceeded to septic shock.

38. (Previously presented) A method of enhancing wound healing in a mammal comprising administering to the mammal a therapeutically effective amount of at least one chemically modified or mutated erythropoietin and a pharmaceutical carrier.

39. (Previously presented) A method of treating, preventing, delaying the onset of, or reducing abdominal sepsis, adhesion formation, abnormal fibrous band formation, formation of a connection between organs, scarring, an inflammatory condition of the prostate, urinary tract system, or visceral smooth muscle in a mammal resulting from a fungal infection, fever, wasting, lethargy, edema, insulin resistance, comprising administering to the mammal a therapeutically effective amount of at least one erythropoietin that is optionally chemically modified or mutated and a pharmaceutical carrier.

40. (Previously presented) A method of treating, preventing, delaying the onset of, or reducing a condition associated with elevated IL-6 in a mammal comprising

administering a therapeutically effective amount of at least one erythropoietin that is optionally chemically modified or mutated in a pharmaceutical carrier.

41. (Previously presented) The method of any one of claims 1 and 38 to 40, wherein said erythropoietin lacks or is diminished for at least one or more of erythropoietin's erythropoietic effects.

42. (Previously presented) The method of any one of claims 1 and 38 to 40, wherein the chemically modified or mutated erythropoietin has at least one of the following modifications as compared to the native erythropoietin molecule:

i) 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, or 13 sialic acid moieties;
ii) a reduced number or no N-linked or O-linked carbohydrates;
iii) a reduced carbohydrate content;
iv) one or more oxidized carbohydrates;
v) one or more oxidized carbohydrates and is chemically reduced;
vi) one or more modified arginine residues;
vii) one or more modified lysine residues or a modification of the N-terminal amino group;
viii) one or more modified tyrosine residues;
ix) one or more modified aspartic acid or glutamic acid residues;
x) one or more modified tryptophan residues;
xii) one or more amino groups removed;
xiii) an opening of one or more of the cystine linkages; and
xiv) is truncated.

43. (Previously presented) The method of any one of claims 1 and 38 to 40, wherein the chemically modified or mutated erythropoietin has one or more of the following mutations: C7S, R10I, V11S, L12A, E13A, R14A, R14B, R14E, R14Q, Y15A, Y15F, Y15I, K20A, K20E, E21A, C29S, C29Y, C33S, C33Y, P42N, T44I, K45A, K45D, V46A, N47A, F48A, F48I, Y49A, Y49S, W51F, W51N, Q59N, E62T, L67S, L70A, D96R, K97D, S100R, S100E, S100A, S100T, G101A, G101I, L102A, R103A, S104A, S104I, L105A, T106A, T106I, T107A, T107L, L108K, L108A, S126A, F142I, R143A, S146A, N147K, N147A, F148Y, L149A, R150A, G151A, K152A,

L153A, L155A, A160S, I6A, C7A, B13A, N24K, A30N, H32T, N38K, N83K, P42A, D43A, K52A, K97A, K116A, T132A, I133A, T134A, K140A, F148A, R150B, G151A, K152W, K154A, G158A, C161A, and/or R162A.

44. (Previously presented) The method of claim 1 and 38 to 40, wherein the chemically modified or mutated erythropoietin comprises at least one of the following mutations: R14Q, S100E, R103A, and/or R150E.

45. (Currently amended) The method of claim 1 and 38 to 40, wherein the chemically modified or mutated erythropoietin comprises at least one of the following combinations of mutations: K45D/S100E or K45D/R150E or R103E/L108S ~~or K45D/R150E~~.

46. (Canceled)

47. (Previously presented) The method of any of claims 1 and 38 to 40, wherein said erythropoietin is carbamylated.

48. (Previously presented) The method of any of claims 1 and 38 to 40, wherein said erythropoietin has at least one polyethylene glycol molecule attached.

49. (Previously presented) A method of treating, preventing, delaying the onset of, or reducing the effects of a condition associated with an effect of proinflammatory cytokines in a mammal comprising administering to the mammal a therapeutically effective amount of at least one chemically modified or mutated erythropoietin, said erythropoietin having at least one polyethylene glycol molecule attached, in a pharmaceutical carrier.

50. (Previously presented) A method of treating, preventing, delaying the onset of, or reducing the effects of a condition associated with proinflammatory cytokines in a mammal comprising administering to the mammal a therapeutically effective amount

of at least one chemically modified or mutated erythropoietin in a pharmaceutical carrier, said erythropoietin having at least one polyethylene glycol molecule attached.

51. (Previously presented) The method of claim 49 or 50, wherein said erythropoietin is also carbamylated.

52. (Previously presented) The method of claim 47, wherein said carbamylated erythropoietin is alpha-N-carbamoyl, N-epsilon-carbamoylerythropoietin.

53. (Previously presented) The method of claim 51, wherein said carbamylated erythropoietin is alpha-N-carbamoyl, N-epsilon-carbamoylerythropoietin

54. (Previously presented) The method of claim 47, wherein said carbamylated erythropoietin has at least 90% of the lysines carbamylated, 95% of the lysines carbamylated, or 100% of the lysines carbamylated.

55. (Previously presented) The method of claim 51, wherein said carbamylated erythropoietin has at least 90% of the lysines carbamylated, 95% of the lysines carbamylated, or 100% of the lysines carbamylated.

56. (Previously presented) The method of any one of claims 1, 38 to 40, 49 or 50, wherein the carbamylated erythropoietin has at least six lysine residues carbamylated, at least seven lysine residues carbamylated, or at least eight lysine residues carbamylated.

57. (Previously presented) The method of claim 49 or 50, wherein the proinflammatory cytokine comprises at least one of Interleukin or TNF.

58. (Previously presented) The method of claim 50, wherein the condition associated with proinflammatory cytokines is an ischemia-related condition, allergy, rheumatic disease, or infection.

59. (Previously presented) A method for treating a condition related to proinflammatory cytokines in a mammal with reduced hematocrit levels comprising administering a therapeutic dose of erythropoietin, said dose sufficient to restore the hematocrit in said mammal, and administering a therapeutic dose of a chemically modified or mutated erythropoietin.

60. (Previously presented) The method of claim 59, wherein said condition is anemia.

61. (Previously presented) The method of claim 60, wherein said anemia is associated with cancer or another chronic disease.

62. (Previously presented) A pharmaceutical composition comprising an amount of at least one chemically modified or mutated erythropoietin effective for use in the method of claim 1.

63. (Previously presented) A pharmaceutical composition comprised of an amount of at least one erythropoietin effective for use in the method of any one of claims 39 to 40.

64. (Previously presented) The pharmaceutical composition of claim 62, wherein the erythropoietin (i) lacks or is diminished for at least one of erythropoietin's erythropoietic effects; (ii) has at least one polyethylene glycol molecule attached; or (iii) is carbamylated.

65. (Previously presented) The pharmaceutical composition of claim 62, wherein said erythropoietin is alpha-N-carbamoyl, N-epsilon-carbamoylerythropoietin.

66. (Previously presented) The method of claim 38, wherein the wound is a result of one or more of trauma, surgery, pressure, burns, diabetes, or vascular insufficiencies.

67. (Previously presented) The method of claim 39, wherein the adhesion formation is a result of one or more of surgery, trauma, infection, chemotherapy, radiation, or cesarean section.

68. (Previously presented) A method for testing the ability of a chemically modified or mutated erythropoietin to treat, prevent, delay the onset of, or reduce complications of sepsis, adhesions, or inflammation resulting from infection comprising:

(i) inducing sepsis, adhesions, inflammation, or a combination thereof in a mammal;

(ii) administering to said mammal the erythropoietin to be tested; and

(iii) determining the adhesion score of the mammal,

wherein if the adhesion score determined in step (iii) is less than the adhesion score absent the erythropoietin then said erythropoietin effectively treats, prevents, delays the onset of, or reduces complications of sepsis, adhesions, or inflammation resulting from infection.

69. (Previously presented) A method for testing the ability of a chemically modified or mutated erythropoietin to treat, prevent, delay the onset of, or reduce complications of sepsis, adhesions, or inflammation resulting from infection comprising:

(i) inducing sepsis, adhesions, inflammation, or a combination thereof in a mammal;

(ii) administering to said mammal the erythropoietin to be tested; and

(iii) determining the illness score of the mammal,

wherein if the illness score determined in step (iii) is less than the illness score absent the erythropoietin, then said erythropoietin effectively treats, prevents, delays the onset of, or reduces complications of sepsis, adhesions, or inflammation resulting from infection.